

Serial No. 09/955,166
Amendment dated August 23, 2005
Reply to Office Action of April 25, 2005

Docket No. HI-0033

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of reporting a changed service option in a mobile communication system, comprising:

~~transmitting a message type, a channel number representing a communication path being used, encryption information, and contents of the changed service option from a base station/base station controller (BS/BSC) to a mobile switching center after a service re-negotiation procedure is performed between a mobile station and the BS/BSC,~~

~~wherein the service re-negotiation procedure occurs after the mobile switching center has been notified about an initially negotiated service option, after the mobile station, the BS/BSC and the mobile switching center has entered into a busy state using the initially negotiated service option, and during an existing call~~

~~transmitting an assignment completion message from a base station or base station controller to a mobile switching center including an initially negotiated service option;~~

~~performing a service re-negotiation procedure for changing a service option between a mobile station and the base station or base station controller after the mobile station,~~

the base station or base station controller, and the mobile switching center has entered into a busy state using the initially negotiated service option;

creating a new service option report or assignment completion message including a message type and the changed service option; and

transmitting the new service option report or assignment completion message from the base station or base station controller to the mobile switching center.

2. (Currently Amended) The method of claim 1, wherein the message type, channel number, encryption information and contents of the changed service option are part of ~~an~~the assignment complete message.

3. (Currently Amended) The method of claim 1, wherein the ~~contents of the~~ changed new service option ~~are report~~ is transmitted as a service option list, and wherein the service option list comprises a service option list Information Element Identifier (IEI) field for simultaneously supporting at least one or more services, a length field for indicating a length of transmitted information, a number of service options field for indicating a number of services changed as a result of the re-negotiation, a service option identifier (SOCI) field for identifying the changed service, and a service option (i) field for indicating the changed information.

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4. (Original) The method of claim 3, wherein if the number of the changed service options is one or more, each of the SOCI information field and the changed service option field are repeated as many as the number of the changed service options.

5. (Canceled).

6. (Currently Amended) A method of reporting a changed service option in a mobile communication system, comprising:

~~transmitting a message type and contents of a changed service option from a base station/base station controller (BS/BSC) to a mobile switching center after a service re-negotiation procedure is performed between a mobile station and the BS/BSC,~~

~~wherein the service re-negotiation procedure occurs after the mobile switching center has been notified about an initially negotiated service option, after the mobile station has entered into a busy state using the initially negotiated service option, and during an existing call;~~

performing a service re-negotiation procedure for changing a service option between a mobile station and a base station or base station controller after the mobile station, the base station or base station controller, and a corresponding mobile switching center has entered into a busy state using the initially negotiated service option;

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creating a new service option report or assignment completion message including a message type and the changed service option; and
transmitting the new service option report or assignment completion message from the base station or base station controller to the mobile switching center.

7. (Cancelled).

8. (Currently Amended) The method of claim 6, wherein the contents of the changed new service option are report is transmitted as a service option list, and wherein the service option list comprises a service option list information element identifier (IEI) field for simultaneously supporting at least one or more services, a length field for indicating a length of transmitted information, a number of service options field for indicating a number of services changed as a result of the re-negotiation, a service option identifier (SOCI) field for identifying the changed service, and a service option (i) field for indicating the changed information.

9. (Original) The method of claim 7, wherein if the number of the changed service options is one or more, each of the SOCI information field and the changed service option field are repeated as many as the number of the changed service options.

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10. (Canceled).

11. (Currently Amended) A method of reporting a service option changed through a service option re-negotiation between a mobile station and a base station/~~base station~~station or base station controller in a mobile communication system, comprising:

~~reporting the changed service option to a mobile switching center using one of an assignment completion message and a service option report message,~~

~~creating a new service option report or assignment completion message including a message type and the changed service option; and~~

~~transmitting the new service option report or assignment completion message from the base station or base station controller to a corresponding mobile switching center,~~

wherein each of the assignment completion message and the new service option report message includes a service option list field indicating the changed options, and

~~wherein the service option re-negotiation occurs after the mobile station has entered into a busy state using an initially negotiated service option, and during an existing call.~~

12. (Original) The method of claim 11, wherein if at least one service option is changed while all other services are maintained as a result of the service option re-negotiation, the contents of the service re-negotiation between the mobile station and the base station/base

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station controller are reported to the mobile switching center using one of the assignment completion message and the service option report message.

13. (Original) The method of claim 11, wherein if a portion of services in progress is to be released and a service option of a non-released service is changed as a result of the service option re-negotiation, the changed service option is reported to the mobile switching center using one of the assignment completion message or the service option report message, and a service release procedure is performed with respect to the released service using a service release message and a service release completion message.

14. (Original) The method of claim 11, wherein if a portion of the services in progress is to be released and non-released services are not to be changed as a result of the service option re-negotiation, a service release procedure is performed with respect to the released service using a service release message and a service release completion message.

15. (Original) The method of claim 11, wherein if all services in progress are to be released as a result of the service option re-negotiation, a call release procedure among the mobile station, base station/base station controller, and mobile switching center is performed.

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16. (Original) The method of claim 11, wherein the service option list field comprises:

a service option list Information Element Identifier (IEI), to identify services provided;

a length field, to indicate a length of transmitted information;

a number of service options field, to indicate the number of services changed as a result of negotiation;

a service option connection identifier (SOCI) field, to identify the changed service; and

a service option field, to indicate the corresponding service information.

17. (Original) The method of claim 16, wherein if the number of the changed service options is one or more, each of the SOCI information field and the changed service option field are repeated as many as the number of the changed service options.

18. (Currently Amended) A method of reporting a change in a service option in a communication system, comprising:

~~performing a service re-negotiation procedure between a mobile station and a base station; and~~

~~transmitting a reporting message from the base station to a mobile switching center indicating an outcome of the service re-negotiation;~~

transmitting an assignment completion message from a base station or base station controller to a mobile switching center including an initially negotiated service option;

performing a service re-negotiation procedure for changing a service option between a mobile station and the base station or base station controller after the mobile station, the base station or base station controller, and the mobile switching center has entered into a busy state using the initially negotiated service option;

creating a new service option report or assignment completion message including a message type and the changed service option; and

transmitting the new service option report or assignment completion message from the base station or base station controller to the mobile switching center,

wherein the reporting message new service option report or assignment completion message comprises a message type field and a service option list field; and

wherein the service re-negotiation procedure occurs after the base station has notified the mobile switching center about an initially negotiated service option, after billing information has been collected regarding the initially negotiated service option, and during a current call corresponding to the initially negotiated service option.

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19. (Cancelled).

20. (Currently Amended) The method of claim-1918, wherein the assignment complete message further comprises a channel number field, and encryption information field, and a service option field.

21. (Currently Amended) The method of claim-1920, wherein the service option list field comprises:

a service option list Information Element Identifier (IEI), to identify services provided;

a length field, to indicate a length of transmitted information;

a number of service options field, to indicate the number of services changed as a result of negotiation;

a service option connection identifier (SOCI) field, to identify the changed service;

and

a service option(i) field, to indicate the corresponding service information.

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22. (Original) The method of claim 21, wherein each of the SOCI field and the service option (i) field are repeated for a number of times equal to the contents of the number of service option field.

23. (Currently Amended) The method of claim 1918, wherein the new service option report message contains no additional fields.

24. (Currently Amended) A Service Option Report message to report a change in services of a call in a communication network, comprising:

a service option list Information Element Identifier (IEI), to identify services provided;

a length field, to indicate a length of transmitted information;

a number of service options field, to indicate the number of services changed as a result of re-negotiation after an initially negotiated service option is being used in a busy state of the communication network, said re-negotiation occurring during an already established call;

a service option connection identifier (SOCI) field, to identify the changed service;

and

a service option(i) field, to indicate the corresponding service information,

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wherein the service option report message is a new service option report created during a re-negotiation procedure for changing a service option between a mobile station and corresponding base station or base station controller, and wherein the new service option report is transmitted from the base station or base station controller to a corresponding mobile switching center to inform the mobile switching center about the re-negotiation services.

25. (Original) The message of claim 24, wherein the service option list (IEI) permits the communication system to simultaneously support at least two services.

26. (Original) The message of claim 24, wherein each of the SOCI and the service option(i) information fields are repeated in the message for a number of times equal to the number of service options.

27. (Original) The message of claim 24, wherein the Service Option Report message is generated in response to a service re-negotiation.